

**Table 1: Rel A CSS L4 with trace to RBRs****CSS L4 Requirement Clean-Up using baseline 07-31-96****This table identifies the relationship between Level\_4 and RBR****This table is for review purposes only.**

RBR ID	REQ KEY	REQ TYPE	RBR TEXT	REQ INTERP	L4 ID	REQ KEY	REQ TYPE	REL	L4 TEXT	CLARIFIC
EOSD5010#A	5171	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.		C-CSS-00510	484	functional	A	The CSS shall provide access to ECS data and services to the clients at the DAACs. <del>and SCFs without distinction using ECS provided software.</del>	
EOSD5010#B	3932	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	C-CSS-01020	640	functional	A	The IDL supported minor versioning shall be upward compatible that requires no changes in the client software to communicate with the new implementation.	<u>as long as the original signatures are preserved</u>
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							

ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.							
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage h. Data Distribution i. Information Management j. End-to-End Fault Management k. System Management	This "high level" requirement covers almost all capabilities provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.						

EOSD1695#A	4831	interface	The ECS shall provide 2-way interoperability with the V0 system.		<del>E-CSS-10100</del>	<del>—441</del>	functional	A	The CSS shall interface with the SDPS subsystems to exchange the data items in Table 6-1 as specified in the ECS internal ICDs, 313-DV3-003.	
EOSD1695#B	3870	interface	The ECS shall provide 2-way interoperability with the V0 system.							
ESN-0070#B	6324	functional	The ESN shall support the intrasite elements data flow requirements identified in this specification.							
V0-0030#A	5864	interface	The ECS shall have the capability to send and ESDIS V0 IMS shall have the capability to receive ECS User Authentication Information [implementation issue 1].							
V0-0030#B	5865	interface	The ECS shall have the capability to send and ESDIS V0 IMS shall have the capability to receive ECS User Authentication Information [implementation issue 1].							
V0-0020#A	3044	interface	ESDIS V0 IMS shall have the capability to send and ECS shall have the capability to receive User Authentication Requests [implementation issue 1].							
V0-0040#A	3048	interface	The ECS shall have the capability to send and ESDIS V0 IMS shall have the capability to receive V0 User Authentication Requests [implementation issue 1].							

V0-0020#B	3045	interface	ESDIS V0 IMS shall have the capability to send and ECS shall have the capability to receive User Authentication Requests [implementation issue 1].							
V0-0040#B	3049	interface	The ECS shall have the capability to send and ESDIS V0 IMS shall have the capability to receive V0 User Authentication Requests [implementation issue 1].							
V0-0050#B	3051	interface	ESDIS V0 IMS shall have the capability to send and ECS shall have the capability to receive V0 User Authentication Information [implementation issue 1].							
V0-0050#A	3050	interface	ESDIS V0 IMS shall have the capability to send and ECS shall have the capability to receive V0 User Authentication Information [implementation issue 1].							
V0-0060#B	3055	interface	The ECS shall have the capability to send and ESDIS V0 IMS shall have the capability to receive Inventory Search Requests via V0 protocols.							
AM1-0270#B	5628	interface	The AM-1 SDVF shall have the capability to send and ECS shall have the capability to receive AM-1 SCC flight software updates.		C-CSS-10200	—442	functional	A	The CSS shall interface with the FOS subsystems to exchange the data items in Table 6-2 as specified in the ECS internal ICDs, 313-DV3-003.	

					<del>C-CSS-10300</del>	<del>—443</del>	functional	A	The CSS shall interface with the MSS subsystems to exchange the data items in Table 6-3 as specified in the ECS internal ICDs, 313-DV3-003.	
					<del>C-CSS-10400</del>	<del>—444</del>	functional	A	The CSS shall interface with the ISS subsystems to exchange the data items in Table 6-4 as specified in the ECS internal ICDs, 313-DV3-003.	
ESN-0490#A	5323	functional	The ESN shall provide a name-to-attribute mapping Directory Service at a minimum.		C-CSS-20010	563	functional	A	The CSS shall provide implementations of the DNS and or X.500 namespaces.	
ESN-0510#A	5326	functional	The directory function shall be able to respond to requests for information concerning named objects, either physical or logical, so as to support communications with those objects.							
ESN-0490#B	3970	functional	The ESN shall provide a name-to-attribute mapping Directory Service at a minimum.							
ESN-0510#B	3971	functional	The directory function shall be able to respond to requests for information concerning named objects, either physical or logical, so as to support communications with those objects.							
EOSD2480#B	3886	security	ECS elements shall require unique sessions when security controlled data are being manipulated.		C-CSS-21005	514	functional	A	The CSS Security service shall provide <u>the functionality to get</u> a unique session key for each client session.	

ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.							
ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							
ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							
EOSD2480#A	4846	security	ECS elements shall require unique sessions when security controlled data are being manipulated.							
EOSD1990#A	6458	security	The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the preceding documents. These documents shall provide the basis for the ECS security policy.	A: as determined in the technical security planning policy activity documented in EOSD2100.	C-CSS-21010	576	functional	A	The CSS Security service shall not transmit <u>its authentication information</u> passwords in clear text across networks.	

ESN-1380#A	5247	security	<p>The ESN shall provide countermeasures for the following security threats related to data communications:</p> <ul style="list-style-type: none"> <li>a. modification of data (i.e., manipulation) while in transit over the network</li> <li>b. disclosure of authentication information</li> <li>c. degradation in network or processing resource performance through denial of service attack</li> <li>d. Impersonation of authentication credentials or authorization privileges.</li> </ul>							
EOSD1990#B	3880	security	<p>The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the preceding documents. These documents shall provide the basis for the ECS security policy.</p>							
ESN-1380#B	4016	security	<p>The ESN shall provide countermeasures for the following security threats related to data communications:</p> <ul style="list-style-type: none"> <li>a. modification of data (i.e., manipulation) while in transit over the network</li> <li>b. disclosure of authentication information</li> <li>c. degradation in network or processing resource performance through denial of service attack</li> <li>d. Impersonation of authentication credentials or authorization privileges.</li> </ul>							

ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.							
ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							
ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							
ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.		C-CSS-21040	579	functional	A	The CSS Security service shall provide an API to limit the time after which a login context will expire.	<u>This time can not be greater than the system configured expiration time.</u>
ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							



ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							
EOSD2480#B	3886	security	ECS elements shall require unique sessions when security controlled data are being manipulated.							
EOSD2640#B	3891	security	ECS elements shall relinquish a connection between the element and a user when the user has not been active for a configurable period of time.							
EOSD2480#A	4846	security	ECS elements shall require unique sessions when security controlled data are being manipulated.							
EOSD2640#A	5069	security	ECS elements shall relinquish a connection between the element and a user when the user has not been active for a configurable period of time.							
ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.		C-CSS-21060	581	functional	A	The CSS Security Service shall provide an API to accept server keys ( <u>i.e. passwords</u> ) associated with services interactively at the startup of a service.	

ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							
ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							
ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ESN-1380#B	4016	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.							

ESN-1380#A	5247	security	<p>The ESN shall provide countermeasures for the following security threats related to data communications:</p> <ul style="list-style-type: none"> <li>a. modification of data (i.e., manipulation) while in transit over the network</li> <li>b. disclosure of authentication information</li> <li>c. degradation in network or processing resource performance through denial of service attack</li> <li>d. Impersonation of authentication credentials or authorization privileges.</li> </ul>							
EOSD2510#B	3887	security	<p>ECS elements shall maintain an audit trail of:</p> <ul style="list-style-type: none"> <li>a. All accesses to the element security controlled data</li> <li>b. Users/processes/elements requesting access to element security controlled data</li> <li>c. Data access/manipulation operations performed on security controlled data</li> <li>d. Date and time of access to security controlled data</li> <li>e. Unsuccessful access attempt to the element security controlled data by unauthorized users/elements/processes</li> <li>f. Detected computer system viruses and worms</li> <li>g. Actions taken to contain or destroy a virus</li> </ul>		C-CSS-21105	423	functional	A	<p>The CSS Security Service shall notify the MSS Management Agent Service upon <u>the failure or success of each authentication request</u>. <del>a predetermined number of unsuccessful login attempts.</del></p>	
EOSD2620#B	3890	security	<p>ECS elements shall disconnect a user/element after a predetermined number of unsuccessful attempts to access data.</p>							

ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.							
ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							
ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							

EOSD2510#A	4847	security	ECS elements shall maintain an audit trail of: a. All accesses to the element security controlled data b. Users/processes/elements requesting access to element security controlled data c. Data access/manipulation operations performed on security controlled data d. Date and time of access to security controlled data e. Unsuccessful access attempt to the element security controlled data by unauthorized users/elements/processes f. Detected computer system viruses and worms g. Actions taken to contain or destroy a virus							
EOSD2620#A	5067	security	ECS elements shall disconnect a user/element after a predetermined number of unsuccessful attempts to access data.							
ASTER-0880#B	5692	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication requests for ASTER GDS privileges of EOSDIS users.		C-CSS-21110	586	functional	A	The CSS Security service shall <u>provide the functionality to</u> authenticate the principal before checking whether the principal is authorized to access a service/resources.	
ASTER-0885#B	5693	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication information specifying ASTER GDS privileges for EOSDIS users.							

ASTER-0895#B	5702	interface	ECS shall have the capability to send and ASTER GDS shall have the capability to receive user authentication information specifying ECS privileges for ASTER GDS users.							
ASTER-0890#B	5699	interface	ASTER GDS shall have the capability to send and ECS shall have the capability to receive user authentication requests for ECS privileges of ASTER GDS users.							
ESN-1380#B	4016	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.							
ESN-1400#B	4017	security	The following security functions and services, at a minimum, shall be provided: a. authentication b. access (authorization) control c. data integrity d. data confidentiality							

ESN-1380#A	5247	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.							
ESN-1400#A	5248	security	The following security functions and services, at a minimum, shall be provided: a. authentication b. access (authorization) control c. data integrity d. data confidentiality							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.		C-CSS-22060	602	functional	A	The CSS Message Service shall purge a message from the message queue after <del>a user</del> <u>an application</u> specified time <u>and an application specified number of tries</u> irrespective of its delivery to the receivers.	
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							

ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.		C-CSS-22150	611	functional	A	The CSS Message Service shall defer sending a message to a receiver, if the receiver is not active, and should try sending the message periodically with <u>an application</u> a set interval of time <u>and an application specified number of tries</u> until the receiver is active.	
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							
EOSD3000#B	3896	security	The ECS shall provide for security safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts, as well as for scheduled system shutdown and operational startup.	for each DAAC as applicable to DAAC activation	C-CSS-24100	4922	functional	A	The CSS Lifecycle Service shall provide <del>a way</del> <u>the capability</u> for server applications to <del>construct</del> <u>activate</u> an object (if it is not already running) and dispatch the incoming call to the object.	
ESN-1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	C-CSS-25010	613	functional	A	The CSS Time Service shall adjust the time kept by the operating system at every node.	<u>Adjustment is done gradually through the OSF DTS Time service</u>
ESN-1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	C-CSS-25020	614	functional	A	The CSS Time Service <del>shall be used</del> <u>provide the functionality</u> to obtain timestamps that are based on Coordinated Universal Time (UTC).	



ESN-1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	C-CSS-25120	483	functional	A	The CSS Time Service shall provide the utilities required to synchronize system time across all components.	<u>through OSF DTS Time service</u>
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage h. Data Distribution i. Information Management j. End-to-End Fault Management k. System Management	This "high level" requirement covers almost all capabilities provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.	C-CSS-60530	661	functional	A	The CSS File Access Service shall support the kerberized version of File Transfer Protocol for secured file transfers.	<u>Release A provides KFTP only. Release B will provide KFTP and DFS.</u>
TRMM3120#B	6394	interface	Communications between TSDIS and the ECS systems at the MSFC DAAC to transport the PR, TMI, and GV standard products, metadata, SSM/I ancillary data, algorithms, and documentation shall be provided by ESDIS.							

TRMM4110#B	6403	interface	Communications between TSDIS and the ECS systems at the GSFC DAAC to transport the VIRS standard products, metadata, GPI, GPCP, and NMC ancillary data, and algorithms and documentation shall be provided by ESDIS.							
TRMM4110#A	6509	interface	Communications between TSDIS and the ECS systems at the GSFC DAAC to transport the VIRS standard products, metadata, ancillary data, and algorithms and documentation shall be provided by ESDIS.							
EOSD1750#B	3877	interface	<p>ECS elements shall receive data including the following types of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is):</p> <ul style="list-style-type: none"> <li>a. Algorithms</li> <li>b. Software fixes</li> <li>c. Instrument calibration data</li> <li>d. Integration support requests</li> <li>e. Metadata for Special Products archiving</li> <li>f. Data transfer requests (inventories, directories, and browse)</li> <li>g. Data Quality/Instrument assessment</li> <li>h. Instrument operations information</li> <li>i. Ancillary data</li> </ul>	B: TRMM, AM-1, and all DAACs						

EOSD1990#B	3880	security	The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the preceding documents. These documents shall provide the basis for the ECS security policy.							
EOSD1750#A	4837	interface	ECS elements shall receive data including the following types of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): a. Algorithms b. Software fixes c. Instrument calibration data d. Integration support requests e. Metadata for Special Products archiving f. Data transfer requests (inventories, directories, and browse) g. Data Quality/Instrument assessment h. Instrument operations information i. Ancillary data	A: TRMM and affected DAACs						
EOSD1990#A	6458	security	The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the preceding documents. These documents shall provide the basis for the ECS security policy.	A: as determined in the technical security planning policy activity documented in EOSD2100.						

ESN-0300#B	3964	functional	The file transfer and management non-interactive services shall be able to be scheduled.		C-CSS-60800	497	functional	A	The CSS File Access Service shall provide an option for scheduling file transfers in a batch mode.	<u>from OODCE server applications using MPF</u>
ESN-0300#A	5304	functional	The file transfer and management non-interactive services shall be able to be scheduled.							
ESN-0300#A	5304	functional	The file transfer and management non-interactive services shall be able to be scheduled.		C-CSS-60810	498	functional	A	The CSS File Access Service shall log results of the non-interactive operations. <del>to operator specified log files.</del>	
ESN-0300#B	3964	functional	The file transfer and management non-interactive services shall be able to be scheduled.							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	C-CSS-60900	500	functional	A	The CSS File Access Service shall provide an API which allows applications to transfer files.	<u>This is done by allowing the application programmer to attach a callback which will be invoked</u>

ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	C-CSS-60920	502	functional	A	The CSS File Access Service shall accept authentication information for file transfers.	<u>normal UNIX authentication on in case of FTP and kerberos authentication on in case of KFTP</u>

ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0340#A	5306	functional	The ESN shall interoperate and exchange messages and data with external SMTP and X.400 mail systems.		C-CSS-61010	449	functional	A	The CSS Electronic Mail Service shall interoperate and exchange messages with external mail systems based on SMTP and X.400 protocols.	<u>SMTP to X.400 gateway is GFE provided by GSFC to which ECS will interface using SMTP</u>
ESN-0340#B	3965	functional	The ESN shall interoperate and exchange messages and data with external SMTP and X.400 mail systems.							

ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service		<del>C-CSS-62050</del>	<del>—508</del>	<del>functional</del>	<del>A</del>	<del>The CSS Bulletin Board Service shall host the user registration service.</del>	
ESN-1181#B	4004	functional	The ESN shall provide an ECS Bulletin Board capability.							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?						
ESN-1181#A	5234	functional	The ESN shall provide an ECS Bulletin Board capability.							

ESN -1380#A	5247	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.		<u>C-CSS-21225</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS Security service shall provide a name based authorization capability.</u>	
ESN - 1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	<u>C-CSS-25155</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS TIME service shall provide a simulated time given a delta time value</u>	
ESN -1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	<u>C-CSS-25160</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS time service shall provide a simulated time given an absolute time value</u>	
ESN -1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	<u>C-CSS-25170</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS time service shall accept delta or absolute time value to be used for simulated time from the cell directory service or a string</u>	



ESN-1000#A	5216	functional	The ESN network management function shall have the capability to build histories for different types of errors and events, and the capability to analyze errors and recommend corrective action wherever practical.	A: Manual	<u>C-CSS-25180</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS time service shall provide an API for obtaining the current time as a rogue wave object</u>	
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64000</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall perform a protocol conversion between socket messages and OODCE RPCS</u>	
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64010</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall route requests received from external providers based on message type and initialization information</u>	

ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64020</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall log all communication errors</u>	
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64030</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall log all authentication requests</u>	

ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64040</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway service (a version of) shall provide the functionality to authenticate, using the DCE/Kerberos authentication service, on behalf of the external providers</u>	<u>applicable only to the gateways using the Kerberos (i.e. TSDIS)</u>
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64060</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall reject requests from a provider unless a valid authentication request is received</u>	

ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64070</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall be capable of listening at a configurable port number</u>	
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64080</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway (a version of) shall be capable of obtaining a well known Kerberos identity with which to encrypt the username and password if needed</u>	<u>applicable only to the gateways using the Kerberos (i.e. TSDIS))</u>

ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64090</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway (a version of) shall be capable of encrypting or providing data integrity (as provided for by Kerberos) as desired by the client</u>	<u>applicable only to the gateways using the Kerberos (i.e. TSDIS)</u>
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64100</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall place in network byte order all messages that it, itself, composes for sending over the socket</u>	

ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64110</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall be capable of receiving control information from both the external entities and the ECS servers</u>	
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?	<u>C-CSS-64120</u>	<u>new</u>	<u>functional</u>	<u>A</u>	<u>The CSS gateway shall provide the capability to exit from the process upon receiving a shutdowncontrol message from the internal ECS servers</u>	
EOSD3000#B	3896	security	The ECS shall provide for security safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts, as well as for scheduled system shutdown and operational startup.	for each DAAC as applicable to DAAC activation	C-CSS-24080	4930	functional	<u>AB</u>	The CSS Lifecycle Service shall provide a way to suspend an application process.	

EOSD3000#B	3896	security	The ECS shall provide for security safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts, as well as for scheduled system shutdown and operational startup.	for each DAAC as applicable to DAAC activation	C-CSS-24090	4931	functional	<del>AB</del>	The CSS Lifecycle Service shall provide a way to resume a suspend application process.	
EOSD5010#A	5171	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.		C-CSS-30010	1012 4	functional	A	The Process Framework shall accept <del>basic process information that is needed while starting up client and server applications using a set of variables defined in a configuration file at start up time process configuration information that it makes available to the application.</del>	
EOSD5010#B	3932	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.							
EOSD5010#B	3932	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.		C-CSS-30020	1012 5	functional	A	The Process Framework shall <u>also</u> accept <del>variables process configuration information via from</del> the command line.	
EOSD5010#A	5171	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.							
EOSD5010#A	5171	security	ECS shall enable extended		C-CSS-30030		functional	A	The Process	

			provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.			1012 6			Framework shall always provide a higher <u>give</u> precedence to the variables defined on the on the command line <u>over those</u> defined in the <u>configuration file</u> .	
EOSD5010#B	3932	security	ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client.							
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage h. Data Distribution i. Information Management j. End-to-End Fault Management k. System Management	This "high level" requirement covers almost all capabilities provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.	C-CSS-30050	1012 8	functional	A	The Process Framework shall provide the ability for a process to get the following information: a. Mode of operation <del>b. Delta Time</del> <del>c. Executable name</del> <del>d. Process ID</del> <del>e. Application ID</del> <del>f. Program ID</del> <del>g. Major Version</del> <del>h. Minor Version</del>	
EOSD0500#B	6264	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations							



			c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage H. Data Distribution							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?						
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							
ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services							

			i. Bulletin Board Service							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.							
ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service		C-CSS-30060	1012 9	functional	A	The Process Framework shall provide interfaces to the underlying distributed architecture to set the following naming parameters: a. Short name for server b. Profile name c. Group name	<u>a. Short name for server; i.e. CDS name</u> <u>b. Profile name; i.e. CDS profile</u> <u>c. Group name; i.e. CDS Group</u>
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?						
ESN-0450#A	5316	functional	The ESN shall provide process-							

			to-process communication service.							
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage h. Data Distribution i. Information Management j. End-to-End Fault Management k. System Management	This "high level" requirement covers almost all capabilities provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.						
EOSD0500#B	6264	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage H. Data Distribution							
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations	This "high level" requirement covers almost all capabilities	C-CSS-30070	10130	functional	A	The Process Framework shall provide interfaces to the underlying distributed	

			c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage h. Data Distribution i. Information Management j. End-to-End Fault Management k. System Management	provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.					architecture to establish the server identity <u>as identified below</u> . <u>a. Message Passing</u> <u>b. Management Agent Framework</u> <u>c. Server Request Framework</u> <u>d. Scheduled File Transfer</u>	
EOSD0500#B	6264	functional	ECS shall perform the following major functions: a. EOS Mission Planning and Scheduling b. EOS Mission Operations c. Command and Control d. Communications and Networking e. Data Input f. Data Processing g. Data Storage H. Data Distribution							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service	A: "mission critical" designation. Those that refer to NSI should be "mission success"?						

			g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							
ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.							
ESN-1380#B	4016	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource		C-CSS-30080	1013 1	functional	A	The Process Framework shall provide interfaces to the underlying distributed infrastructure to set the following security parameters: a. Server principal name b. Keytab file name c. ACL database filename	<u>c. ACL database filename or a sybase key - what ever is needed to access the ACLs associated with that process</u>

			performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.							
ESN-1400#B	4017	security	The following security functions and services, at a minimum, shall be provided: a. authentication b. access (authorization) control c. data integrity d. data confidentiality							
ESN-1380#A	5247	security	The ESN shall provide countermeasures for the following security threats related to data communications: a. modification of data (i.e., manipulation) while in transit over the network b. disclosure of authentication information c. degradation in network or processing resource performance through denial of service attack d. Impersonation of authentication credentials or authorization privileges.							
ESN-1400#A	5248	security	The following security functions and services, at a minimum, shall be provided: a. authentication b. access (authorization) control c. data integrity d. data confidentiality							
ESN-0010#A	5196	security	ESN shall provide the following standard services: a. Data Transfer and	A: "mission critical" designation. Those that refer	C-CSS-30090	1013 2	functional	A	The Process Framework shall provide an interface to the underlying distributed	<u>Protocol policy – tcp/udp</u>

			Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service	to NSI should be "mission success"?					architecture to set the protocol policy	
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication service.							
ESN-0010#B	3955	security	ESN shall provide the following standard services: a. Data Transfer and Management Services b. Electronic Messaging Service c. Remote Terminal Service d. Process to Process Communication Service e. Directory and User Access Control Service f. Network Management Service g. Network Security and Access Control Service h. Internetwork Interface Services i. Bulletin Board Service							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.							
EOSD0500#A	5598	functional	ECS shall perform the following major functions: a. EOS Mission Planning and	This "high level" requirement covers almost						

			<p>Scheduling</p> <p>b. EOS Mission Operations</p> <p>c. Command and Control</p> <p>d. Communications and Networking</p> <p>e. Data Input</p> <p>f. Data Processing</p> <p>g. Data Storage</p> <p>h. Data Distribution</p> <p>i. Information Management</p> <p>j. End-to-End Fault Management</p> <p>k. System Management</p>	all capabilities provided by ECS. Only selected software and hardware requirements are mapped to this requirement. Additional software requirements are mapped to "lower level" RBRs which are more specific.						
EOSD0500#B	6264	functional	<p>ECS shall perform the following major functions:</p> <p>a. EOS Mission Planning and Scheduling</p> <p>b. EOS Mission Operations</p> <p>c. Command and Control</p> <p>d. Communications and Networking</p> <p>e. Data Input</p> <p>f. Data Processing</p> <p>g. Data Storage</p> <p>H. Data Distribution</p>							
ESN-0450#B	3969	functional	The ESN shall provide process-to-process communication service.		C-CSS-30100	1013 3	functional	A	The Process Framework shall provide an interface to the underlying distributed architecture to set the host policy	<u>host policy - whether multiple instances of a server can be run on the same host)</u>
ESN-0450#A	5316	functional	The ESN shall provide process-to-process communication							



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